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(54) Title: METHOD OF CATEGORIZATION AND INDEXING OF INFORMATION

(57) Abstract: A method of organising information is disclosed. The system disclosed here organises the information in categories described by type of information, function of the object of information, branch of knowledge, relationship with the downstream process, process output, sector, source process and source sector. Information group is created based on entries in all the fields. The database captures information from the entries made, and helps to locate the information even when exact title of information is not known, by selectively entering the terms in the search fields.

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***Title Of Invention:*****Method Of Categorization And Indexing Of Information*****Field Of The Invention:***

This invention generally relates to method of organizing information and more  
5 particularly to Internet search engines and directories.

***Background Of The Invention:***

Computers have become a very useful tool to save information for the purpose of  
retrieval of the desired document as it can manage a very large collection of records.  
However with ever increasing collection of documents that is Internet, organisation of  
10 the information has become a very difficult task. Currently mechanisms that are used for  
the purpose are directories and search engines. The directories are hierarchical  
structures, which group the similar type of documents together in groups and  
subgroups. This type of structure is unable to take into consideration multiple  
relationships that normally exist in the documents and information.

15 For Example:

- A typical product directory for machines may group the machines as per the  
types like Lathes, Milling Machines, Grinding Machines, and Shaping M/c etc.
- These may also be organised based on application like Machines for wristwatch  
industry, M/c for Automobile industry, Machines for heavy industry etc.,
- 20 • These can also be categorized based on type of usage like large-scale  
production, medium scale production, workshop m/c etc.
- These can also be classified based on type of raw material the machines are  
designed to work on.
- These can also be categorized based on types of controls used like Automatic,  
25 semiautomatic, manual etc.
- There can be further categorisation based on make, source, quality certification,  
special construction features etc.

All these relations cannot be effectively addressed in directory indexing.

- Search engine like Yahoo, Excite, AltaVista, Google etc. stores and index key words extracted from the text of the document. The documents are given relative ranking for a particular keyword based on the emphasis, occurrences and location of the word in the document. For searching desired document, user enters keywords that are likely to
- 5 appear in the desired document in the search field. The result is generally a list of document, which contains the entered key word. The user has to browse through the documents before finding the required document. To improve precision of the document search the current search engines employ various techniques like ranking based on user activity, proximity grouping etc.
- 10 Still the search is far from satisfactory especially for technical and business information.

### ***Summary Of The Invention:***

The invention disclosed here has three main components, an indexing system including a grouping system, a search system and a user interface.

- In one aspect of the invention, the indexing system provides multiple fields for indexing
- 15 the document. Every field, provided for indexing the document, has a defined relationship with the information contained in the indexed document. The defined relationships are Information Type, Object of the Information, Source Sector Of the object of information, Source process of the object of information, Function of the object of information, Branch of knowledge, Application Or Process for which object of
- 20 information is used, Relation of the information with the application, Category of the Process or application, Output of the Process Or Application, Sector of the Output.

- In one aspect of the invention, the fields Information Type, Source Sector Of the object of information, Source process of the object of information, Branch of knowledge, Relation of the information with the application, Category of the Process or application,
- 25 Sector of the Output are predefined and rest are user defined.

In one aspect of the invention, each unique set of field entries is defined as a distinct category under which documents are grouped. These categories are defined by a text expression generated from the field entries and joining the terms with suitable defining terms.

In one aspect of the invention, the search is carried out in two stages. In the stage one of the search, appropriate entries are made in the search fields if known, and the output is categories available in the database conforming to the search query. In second stage desired category is selected to view documents registered under it.

- 5 In one aspect of the invention, making entries in additional fields reduces the number of resultant categories and helps to locate the information quickly.

In one aspect of the invention, queries like raw materials required for manufacturing a given product or technologies for manufacturing a given product or materials going from a given sector to another given sector can be raised.

- 10 In one aspect of the invention, complex queries like alternatives for raw materials, machinery, technology etc., products going from one sector to another, etc. can be queried to the database.

### ***Brief Description Of Drawings and Tables:***

Figure 1: Relationships of the expressions used for indexing information.

- 15 Figure 2: General arrangement

Table 1: Table describing fields.

Table 2: List of document type categories

Table 3: List of Branch of knowledge categories

Table 4: List of Sector categories

- 20 Table 5: List Process Categories

Table 6: List of Object to process relationships

### ***Detailed Description Of Preferred Embodiments***

- The method for organising information disclosed here is useful for variety of applications, which include indexing of web pages on Internet, indexing of classified advertisements, indexing of interests to receive information by e-mail or instant messaging etc.
- 25

The information is organised in precisely searchable categories and stored in the database.

In the system described here the required information is searched in two stages. In stage one the appropriate category is searched and in stage two, information stored  
5 under the category is viewed

The system is basically consists of a database preferably a relational database, a user interface, an information entry program and information search program.

#### **A. The database:**

The database has following tables:

- 10 a) Document type table: This table stores standardized categories of the documents for validation.
- b) Object of information table: This table stores entries made in the field of object of information.
- c) Branch of Knowledge table: This table stores standardized branch of knowledge of  
15 the documents for validation for the purpose of validation
- d) Function Table: This table stores entries made in the field of function of the object of information.
- e) Process Table: This table stores entries made in the field of process names.
- f) Process Category Table: This table stores standardized process category of the  
20 processes for validation.
- g) Process Output Table: This table stores entries made in the field of process output.
- h) Sector Table: This table stores standardized names of sectors for validation.
- i) Object to process relationship table: This table stores standardized object to process relationships for validation. These are basically expanded from man,  
25 money, machine, material, system, and organisations further expanded.
- j) Category Table: This table stores the categories created by unique combination of entries in eleven fields, which uniquely describes the category.
- k) Category to URL table: This table records title of the document, URL of the document and category as described in category table.

l) Category to Classified Advertisement Table: This table records title of the classified Advertisement, Classified advertisement and category as described in category table.

5 m) Category to email table: This table records e-mail and category as described in category table.

The details of standardised categories are described elsewhere in the document.

### **B. The User interface:**

10 The user interface is WebPages and has three main functions information registration and search, where information is WebPages or classified advertisements.

Registration of information: Sequence of steps are as following: -

- To communicate requirement for registration of information to the users,
- Accept information for registration,
- Carry out initial validation of data,
- 15 Transfer the data to registration module for information registration.

Search of Information: Sequence of steps is as following: -

1. To communicate requirement for search of information to the users,
2. Accept search query from user.
3. Transfer the query to search module for search of categories.
- 20 4. Accept the categories information from the search module.
5. Display the categories information received from the search module to the user.
- Accept selection of categories from the users.
6. Transfer the categories selected by the user to the search module.
7. Accept search results from the search module.
- 25 8. Display search results to the users.

The user interface also communicates other related messages.

### **C. The Information input program:**

This program accepts information received from users through user interface and updates it to database. The sequence of steps is as following:

1. Accept entries to indexing field for selection of categories
2. If all the fields are defined then save the information to the database.
3. If the user does not define all the fields, then offer categories available for registration conforming to the entries made in the fields for selection to the user.
- 5 4. Accept categories selected by the user for registration and save the information against all selected categories.

#### **D. The Information search program:**

This program accepts user queries received through user interface and carries out search in the database. The sequence of steps is as following:

- 10 1. Accept entries to search field for search of categories
2. Display categories available in the database conforming to the entries made in the fields for search by the user.
3. Accept categories selected by the user for displaying the information.
4. Send information available against the categories to the user interface
- 15 The System described above, user interface in particular is simplified to enable users to register and search a particular type of information, which is used very often, quickly. For example: Machines and equipment, Raw materials, Flats and apartments, Plots & real estate, Cars and vehicles, Tours and travels, Computers, Jobs and assignments, Representation and franchises, etc. In such cases user interface is modified where
- 20 necessary field entries are built up, irrelevant field entries are deleted, which provides user with minimum and relevant option.

The system described above can be used to find out information even if the title of the information is not known, as by selecting appropriate entries in other field relevant categories can be viewed. For example:

- 25 To search raw material for any product select "Product and service information" in field - document type, "Raw material" in field – object to process relationship, and name of the product in the field – process output. The output from the search query shall display all the raw materials required for manufacturing of the product along with the processes.
- Similarly information can be searched for technology, consumables, machines and
- 30 equipment etc.

Also the information can be searched only describing function, sector, branch of knowledge etc.

The foregoing description of an implementation of the invention has been presented for purposes of illustration and description. It is not exhaustive and does not limit the invention to the precise form disclosed. Modifications and variations are possible in light of the above teachings or may be acquired from practicing of the invention. For example, the described implementation includes software but the present invention may be implemented as a combination of hardware and software or in hardware alone. The scope of the invention is defined by the claims and their equivalents.

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## Claims

1. A method for organizing information in a computer system, including an index database, a system to input information, a system to search information, and a user interface
2. The index database as recited in claim 1, wherein the database being able to store one or more index record for every indexed document.
- 2.1 The system as recited in claim 2, wherein every index record is a unique category described by multiple index expressions.
- 2.2 The system as recited in claim 2.01, wherein every index expression has a distinct identification within the index record.
- 2.3 The system as recited in claim 2.02, wherein every uniquely identified expression has a defined relationship with the information indexed by the index record.
- 2.3.1 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expressions is assigned to indicate the nature of the content in the indexed information.
- 2.3.1.1 The system as recited in claim 2.03.01, wherein nature of the content is a standardized category to indicate the purpose of the indexed information.
- 2.3.2 The system as recited in claim 2.03, wherein at least one uniquely identified index expression is assigned to store the name of the object of the information.
- 2.3.3 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expressions is assigned to describe function of the object of the indexed information corresponding to the index record.
- 2.3.4 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to identify downstream process of the object of the indexed information corresponding to the index record.
- 2.3.5 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expressions is assigned to indicate the category of the process corresponding to the index record.
- 2.3.5.1 The system as recited in claim 2.03.5, wherein category of the process is one of the standardized categories.

2. 3.6 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expressions is assigned to indicate the relationship between object of the information and the process corresponding to the index record.
- 5 2.3.6.1 The system as recited in claim 2.03.6, wherein the relationship between object of the information and the process is one of the standardized categories.
2. 3.7 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to describe the output from the process corresponding to the index record.
- 10 2. 3.8 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to indicate sector to which the output from the process belongs, corresponding to the index record.
- 2.3.8.1 The system as recited in claim 2.03.8, wherein sector is one of the standardized categories.
- 15 2. 3.9 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to indicate dominant branch of knowledge corresponding to the index record, for the indexed information.
- 2.3.9.1 The system as recited in claim 2.03.9, wherein branch of knowledge is one of the standardized categories.
- 20 2. 3.10 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to indicate sector of the object of information.
- 2.3.10.1 The system as recited in claim 2.03.10, wherein sector is one of the standardized categories.
- 25 2. 3.11 The system as recited in claim 2.03, wherein at least one of the uniquely identified index expression is assigned to indicate the category of the process from which the object of the information has originated.
- 2.3.11.1 The system as recited in claim 2.03.11, wherein category of the process is one of the standardized categories.
- 30 3. The system as recited in claim 2.01, wherein the expression describes trade and/ or technical name/s of the object, function, process and process output, along with denominations of group, subgroups to which it belongs, in a sequence, and with mathematical operators, indicating the group, subgroup & synonym relationships, wherever appropriate.

4. The system as recited in Claim 1, wherein the user interface is provided to accept the indexing expressions as required for claims 2.03.1 to 2.03.11.
5. The system as recited in Claim 1, wherein the search system comprises of a query module and a user interface.
- 5 5.1 The system as recited in claim 5, wherein the query module is capable to receive and to process a query.
- 5.2 The system as recited in claim 5.01, wherein every query has multiple uniquely identified expressions and where some of the expressions may be null.
- 10 5.3 The system as recited in claim 5.02, wherein every uniquely identified expression has a defined relationship with the desired information where identification of expression and corresponding relationship being the same as that in the index being queried.
- 15 5. 3.1 The system as recited in claim 5.03, wherein at least one of the uniquely identified query expression is assigned to indicate the nature of the content in the desired document.
- 5.3.1.1 The system as recited in claim 5.03.01, wherein nature of the content is a standardized category to indicate the purpose of the desired information.
5. 3.2 The system as recited in claim 5.03, wherein at least one uniquely identified index expression is assigned to indicate the name of the object of the desired information.
- 20 5. 3.3 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expressions is assigned to describe function of the object of the desired information.
5. 3.4 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to identify downstream process of the object of the desired information.
- 25 5. 3.5 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expressions is assigned to indicate the category of the process for which the information is required.
- 30 5.3.5.1 The system as recited in claim 5.03.5, wherein category of the process is one of the standardized categories.

5. 3.6 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expressions is assigned to indicate the relationship between object of the information and the process corresponding to the desired information.
5. 3.6.1 The system as recited in claim 5.03.6, wherein the relationship between object of the information and the process is one of the standardized categories.
5. 3.7 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to describe the output from the process corresponding to the desired information.
5. 3.8 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to indicate sector to which the output from the process belongs, corresponding to the desired information.
- 5.3.8.1 The system as recited in claim 5.03.8, wherein sector is one of the standardized categories.
5. 3.9 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to indicate dominant branch of knowledge corresponding to the desired information.
- 5.3.9.1 The system as recited in claim 5.03.9, wherein branch of knowledge is one of the standardized categories.
5. 3.10 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to indicate sector of the object of the desired information.
- 5.3.10.1 The system as recited in claim 5.03.10, wherein sector is one of the standardized categories.
5. 3.11 The system as recited in claim 5.03, wherein at least one of the uniquely identified index expression is assigned to indicate the category of the process from which the object of the desired information has originated.
- 5.3.11.1 The system as recited in claim 5.03.11, wherein category of the process is one of the standardized categories.
-

## Relationships of the expressions used for indexing information.

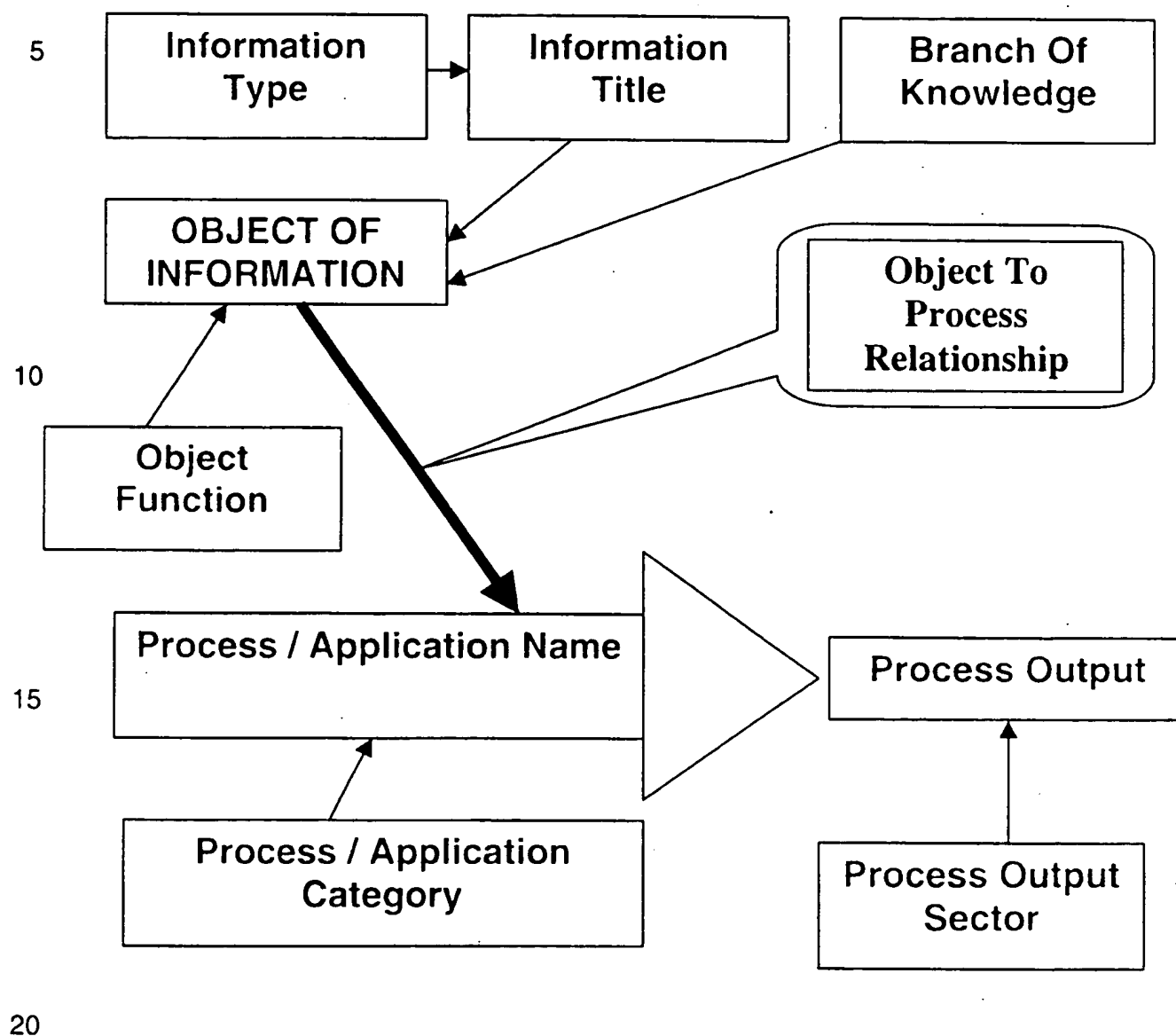


Figure 1

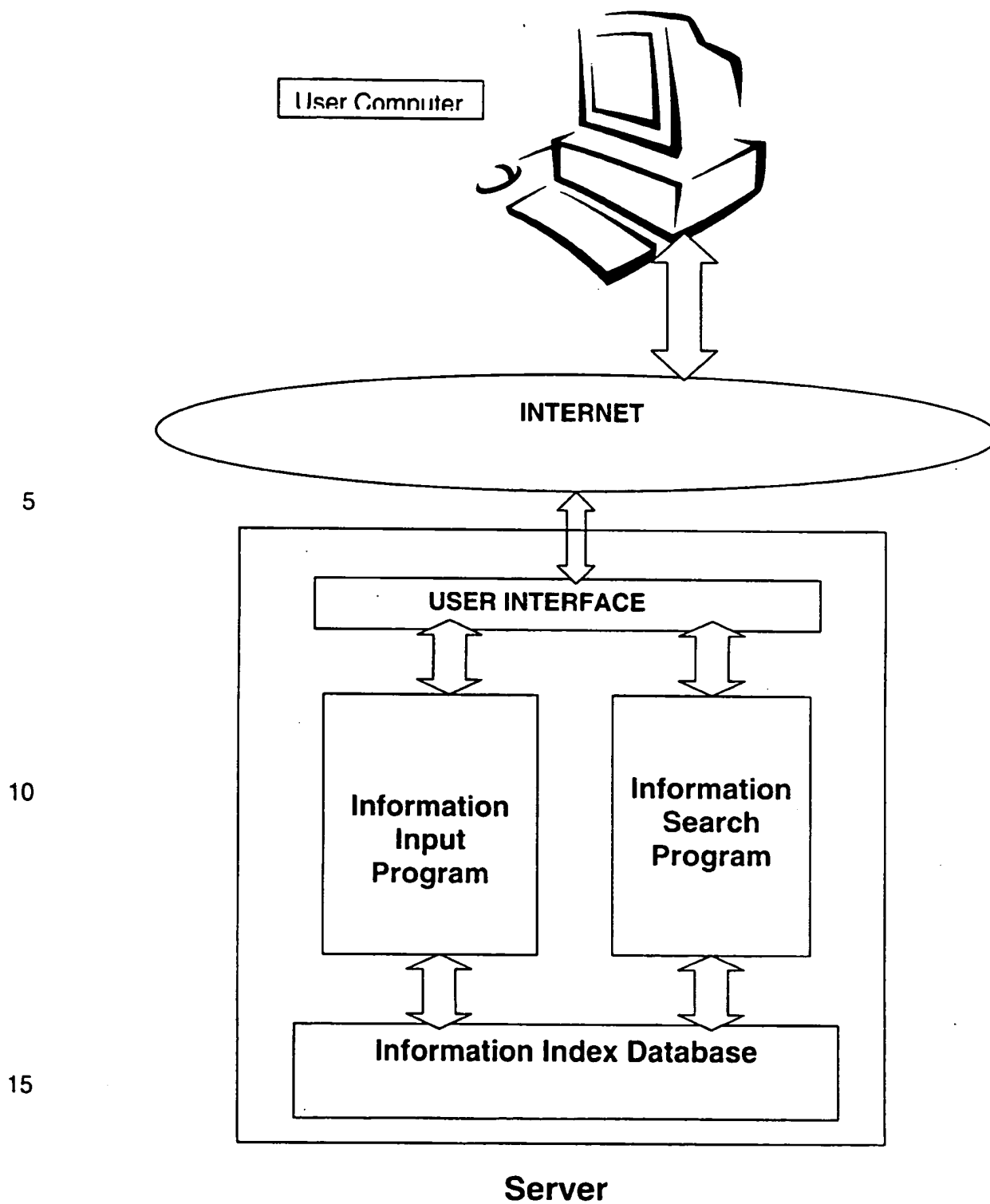


Figure 2: General arrangement

## Field Relationships for Indexing

Sr. No.	Field Title	Description	Type
1	Information Type	The Type of information is indicated by the field	Predefined
2	Information object	Object of the information is indicated by the field	User defined
3	Object to Process Relation	Object to process relation is indicated.	Predefined
4	Object Function	Function of the object is indicated	User defined
5	Process / Activity name	Name of the downstream process is indicated	Predefined
6	Process Category	Category of the process indicated.	Predefined
7	Process output	Output of the process to be indicated.	User defined
8	Sector	This field indicates business or industry sector	Predefined
9	Branch of knowledge	This field indicates dominant branch of knowledge.	Predefined
10	Source Sector	Sector from where the object originates is indicated.	Predefined
11	Source Process	Process where the object originates is indicated.	Predefined

5

Table 1: Table describing fields.

## Document Types

- 5                   1. General Information
2. Advanced Information
3. Products/ Services Information
4. Research work Information
5. News & Published Articles
- 10               6. Codes and Standards
7. Commercial Information
8. Prices and quotations
9. Books, Magazines and Journals
10. Project Reports
- 15               11. Survey reports

Table 2: List of document type categories

## Branch Of Knowledge

<i>Agriculture - Agriculture</i>	<i>Creative arts - Craft</i>	<i>Engineering - Petroleum</i>	<i>Medical Sciences - Ayurved</i>	<i>Physical sciences - Ecology, Climatology</i>
<i>Agriculture - Animal husbandry</i>	<i>Creative arts - Creative therapies</i>	<i>Engineering - Polymers and Plastics</i>	<i>Medical Sciences - Biomedicine</i>	<i>Physical sciences - Geography</i>
<i>Agriculture - Dairy</i>	<i>Creative arts - Design studies</i>	<i>Engineering - Power Plant</i>	<i>Medical Sciences - Cardiology</i>	<i>Physical sciences - Geology</i>
<i>Agriculture - Fisheries</i>	<i>Creative arts - Drama</i>	<i>Engineering - Remote sensing</i>	<i>Medical Sciences - Dentistry</i>	<i>Physical sciences - Hydrology</i>
<i>Agriculture - Food science</i>	<i>Creative arts - Fine arts</i>	<i>Engineering - Robotics</i>	<i>Medical Sciences - Disability</i>	<i>Physical sciences - Marine science</i>
<i>Agriculture - Forestry</i>	<i>Creative arts - Literature</i>	<i>Engineering - Telecommunications</i>	<i>Medical Sciences - Genetics</i>	<i>Physical sciences - Materials science</i>
<i>Agriculture - Horticulture</i>	<i>Creative arts - Music</i>	<i>Engineering - Textiles</i>	<i>Medical Sciences - Homeopathy</i>	<i>Physical sciences - Meteorology</i>
<i>Agriculture - Live Stock</i>	<i>Creative arts - Other</i>	<i>Humanities - Games and sports</i>	<i>Medical Sciences - Immunology</i>	<i>Physical sciences - Mineralogy</i>
<i>Agriculture - Organic farming</i>	<i>Creative arts - Painting</i>	<i>Humanities - Archaeology</i>	<i>Medical Sciences - Medicine</i>	<i>Physical sciences - Nuclear Physics</i>

Table 3: List of Branch of knowledge categories - Continued



Continued from previous page

Agriculture - Poultry	Creative arts - Performing	Humanities - Economic and social history	Medical Sciences - Mental Health	Physical sciences - Oceanography
Agriculture - Veterinary Science	Creative arts - Photography	Humanities - History	Medical Sciences - Nephrology	Physical sciences - Optics
Architecture - Environmental technologies	Creative arts - Printing	Humanities - Philosophy	Medical Sciences - Neuroscience	Physical sciences - Physics
Architecture - General	Creative arts - Visual	Humanities - Theology and religious studies	Medical Sciences - Nursing	Physical sciences - Seismology
Architecture - Interior design	Education & Educational technology	Management studies - Accountancy	Medical Sciences - Nutrition	Physical sciences - Space Sciences
Architecture - Landscape architecture	Engineering - Aerospace Aeronautics	Management studies - Advertising, Publicity	Medical Sciences - Occupational health and safety	Social studies - Anthropology
Architecture - Town planning	Engineering - Astronautics	Management studies - Human resource	Medical Sciences - Ophthalmics/Audiology	Social studies - Criminology
Biological Sciences - Biochemistry	Engineering - Biotechnology	Management studies - Industrial relations	Medical Sciences - Other	Social studies - Demography
Biological Sciences - Biology	Engineering - Ceramics and glass	Management studies - Business	Medical Sciences - Palaeontology	Social studies - Development Studies
Biological Sciences - Botany	Engineering - Chemical	Management studies - Finance & Banking	Medical Sciences - Pathology	Social studies - Economics
Biological Sciences - Genetics	Engineering - Civil	Management studies - Institutional management	Medical Sciences - Pharmacology	Social studies - Education
Biological Sciences - Marine Biology	Engineering - Computer Hardware	Management studies - Land and property	Medical Sciences - Pharmacy	Social studies - Geography
Biological Sciences - Microbiology	Engineering - Computer Software	Management studies - Marketing and market research	Medical Sciences - Psychiatry	Social studies - Languages
Biological Sciences - Molecular Biology/Biophysics	Engineering - Cryogenics	Management studies - Operational research	Medical Sciences - Public Health	Social studies - Law
Biological Sciences - Other	Engineering - Electrical	Management studies - Other	Medical Sciences - Radiology	Social Studies - Linguistics
Biological Sciences - Psychology	Engineering - Electronics	Mathematical science - Advanced	Medical Sciences - Sports science	Social studies - Museum science
Biological Sciences - Zoology	Engineering - Fluid mechanics	Mathematical science - Algebra	Medical Sciences - Virology	Social studies - Other
Communication - Communication studies	Engineering - Industrial	Mathematical science - Calculus	Other	Social studies - Physical Training
Communication - Information science	Engineering - Manufacturing	Mathematical science - Geometry	Other - Astrology	Social studies - Political science
Communication - Journalism	Engineering - Marine	Mathematical science - Mathematics	Other - Forensic science	Social studies - Politics
Communication - Library Sciences	Engineering - Mechanical	Mathematical science - Other	Other - Metaphysics	Social studies - Psychology
Communication - Literature	Engineering - Metallurgy	Mathematical science - Statistics	Other - Military science	Social studies - Social policy and administration
Communication - Media studies	Engineering - Minerals technology	Mathematical Science - Topology	Other - Phonetics	Social studies - Social work
Communication - Publishing	Engineering - Mining	Mathematical science - Trigonometry	Other - Security, Espionage etc.	Social studies - Sociology
Communication - Tourism	Engineering - Nanotechnology	Medical Sciences - Alternative Medicine	Physical sciences - Astronomy	Other
Creative arts - Cinematography	Engineering - Nuclear	Medical Sciences - Anatomy/Physiology	Physical sciences - Chemistry	

Table 3: List of Branch of knowledge categories

## Sectors

<i>Advanced Sciences - Nuclear</i>	<i>Industry - Metals Refining</i>	<i>Services - Publishing</i>
<i>Advanced Sciences - Other</i>	<i>Industry - Mining &amp; Mineral Processing</i>	<i>Services - Real Estate</i>
<i>Advanced Sciences - Space</i>	<i>Industry - Ocean Wealth &amp; Fishing</i>	<i>Services - Taxation</i>
<i>Domestic &amp; Household</i>	<i>Industry - Other</i>	<i>Services - Telecommunications</i>
<i>Forestry</i>	<i>Industry - Paper &amp; Printing</i>	<i>Services - Tours, Travels and Excursions</i>
<i>Government and Public Affairs</i>	<i>Industry - Petroleum</i>	<i>Services - Transport - Air Space</i>
<i>Industry - Agriculture</i>	<i>Industry - Plastics, rubber &amp; non metals</i>	<i>Services - Transport - Marine</i>
<i>Industry - Automobiles</i>	<i>Industry - Textiles &amp; Fibres</i>	<i>Services - Transport - Railways</i>
<i>Industry - Chemicals &amp; Pharmaceuticals</i>	<i>Military</i>	<i>Services - Transport - Roadways</i>
<i>Industry - Civil Construction &amp; Housing</i>	<i>Other</i>	<i>Social Affairs - Arts &amp; Culture</i>
<i>Industry - Electrical Power</i>	<i>Services - Banking, Finance &amp; Insurance</i>	<i>Social Affairs - Games &amp; Sports</i>
<i>Industry - Electronics</i>	<i>Services - Broadcasting</i>	<i>Social Affairs - Literature</i>
<i>Industry - Food &amp; related</i>	<i>Services - Education And Training</i>	<i>Social Affairs - Religion, mythology</i>
<i>Industry - General</i>	<i>Services - Engineering &amp; Technical</i>	<i>Social Affairs - Theatre &amp; Entertainment</i>
<i>Industry - Information Technology</i>	<i>Services - Hospitality</i>	
<i>Industry - Fabrication &amp; Manufacturing</i>	<i>Services - Medicine and Health</i>	
<i>Industry - Marine</i>	<i>Services - Other</i>	

5

**Table 4: List of Sector categories**

## Process Categories

<i>Application, Operation or End use</i>	<i>Government Activities</i>	<i>Play or Performance</i>
<i>Business operation &amp; management</i>	<i>Laboratory process</i>	<i>Production or Processing</i>
<i>Business/ Organisation Set up</i>	<i>Maintenance &amp; Overhauling</i>	<i>Public Movement</i>
<i>Business Promotion and Advertising</i>	<i>Marketing</i>	<i>Research And Analysis</i>
<i>Communication</i>	<i>Medical Diagnostic processes</i>	<i>Service Delivery</i>
<i>Construction, Creation or Fabrication</i>	<i>Medical Operating procedures</i>	<i>Social Activities</i>
<i>Domestic Application</i>	<i>Medical Treatment Processes</i>	<i>Trading And Sales</i>
<i>Education and training</i>	<i>Military Operations</i>	<i>Transportation</i>
<i>Engineering and Development,</i>	<i>Other</i>	
<i>Family Activities</i>	<i>Personal Activities</i>	

5

**Table 5: List Process Categories**

## Object to process relationships

5

<i>Technology / Information</i>	<i>Raw Material</i>	<i>Management Manpower</i>
<i>Site, Plot</i>	<i>Component &amp; spares</i>	<i>Technical Services</i>
<i>Factory building, Office or apartment</i>	<i>Accessory</i>	<i>Management Services</i>
<i>Machines and Equipment</i>	<i>Fuel</i>	<i>Other Services</i>
<i>Tools and fixtures</i>	<i>Consumable</i>	<i>Process Waste</i>
<i>Instrument</i>	<i>Management Information</i>	<i>Other</i>
<i>Utilities</i>	<i>Management Software</i>	<i>General</i>
<i>Process Catalyst</i>	<i>Technical Manpower</i>	
<i>Process Software</i>	<i>Operating Manpower</i>	

**Table 6: List of Object to process relationships**

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(71) Applicant and

(72) Inventor: KOTWAL, Milind [IN/IN]; B-304, Aaidham-B, Opp. to Post Office, Kalwa, Thane 400 605 (IN).

HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF CATEGORIZATION AND INDEXING OF INFORMATION

(57) Abstract: A method of organising information is disclosed. The system disclosed here organises the information in categories described by type of information, function of the object of information, branch of knowledge, relationship with the downstream process, process output, sector, source process and source sector. Information group is created based on entries in all the fields. The database captures information from the entries made, and helps to locate the information even when exact title of information is not known, by selectively entering the terms in the search fields.

WO 01/27713 A3

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IN00/00101

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G06F 17/60

US CL : 705/1

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/1, 705/2, 705/3, 705/20, 705/22, 705/28, 705/29, 705/30, 705/51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST

search terms: index database, tracking, identifier, relational database, data mining, search engine

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,678,046 A (CAHILL et al.) 14 October 1997 (14.10.97) abstract; figures 1,2,5,10-12,16,18,20-24; col 1umn, lines 7-19; column 2, lines 52-67; column 3, lines 62-65; column 4, lines 10-15; column 5, lines 10-56; column 6, lines 10-40; column 7, lines 22-50; column 8, lines 50-67; column 9, lines 42-50; column 10, lines 7-12 and 33-42; column 12, lines 38-67; column 13, lines 1-35; column 15, lines 1-67; column 16, lines 60-65; column 22, lines 50-67; column 23, lines 7-23; column 25, lines 1-35; column 27, lines 20-67; column 28, lines 15-67; column 29, lines 1-67; column 30, lines 1-67; column 31, lines 1-67; column 38, lines 20-67; column 39, lines 1-67; column 41, lines 1-47; column 42, lines 12-56	All claims (1-47) or using Applicants numbering scheme, claims 1-5.3.11.1

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer CALVIN LOYD HEWITT <i>James R. Matthews</i> Telephone No. (703) 308-8057

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/TN00/00101

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 5,974,396 A (ANDERSON et al.) 26 October 1999 (26.10.99) abstract; 2,3,5-13; column 2, lines 39-67; column 3, lines 1-29 and 50-67; column 4, lines 1-34; column 5, lines 55-64; column 6, lines 5-67; column 7, lines 1-5 and 51-67; column 8, lines 1-20 and 35-48; column 9, lines 33-67; column 10, lines 1-67; column 11, lines 41-67; column 12, lines 1-9 and 48-67; column 15, lines 1-67; column 17, lines 1-67; column 18, lines 17-67; column 19, lines 1-67; column 21, lines 1-67; column 22, lines 1-67; column 23, lines 1-57; column 24, lines 1-50	All claims (1-47) or using Applicants numbering scheme, claims 1-5.3.11.1